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EXAMINER

KURTZ, BENJAMIN M

ART UNIT	PAPER NUMBER
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1723

DATE MAILED: 06/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/802,756

Applicant(s)

MELIN, JAN

Examiner

Benjamin Kurtz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 13-33 is/are rejected.
- 7) ☒ Claim(s) 4-5, 9-12, 15, 17-19 and 21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/26/04.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "16" has been used to designate both threading and a lower part of the casing.
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 88, 66, 17, 46 and 22.

Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The abstract of the disclosure is objected to because it exceeds 150 words in length and it contains legal phraseology. Correction is required. See MPEP § 608.01(b).

4. The use of the trademark Arag on page 1, line 15 has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Claim Objections

5. Claims 9-12 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.

6. Claims 4-5 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependant claim (claim 4) cannot depend from another multiple dependent claim (claim 3); and (claim 5, a multiple dependant claim) cannot depend from another multiple dependent claim (claim 3 or 4). See MPEP § 608.01(n). For examination purposes claim 4 is taken to depend from claim 3, and claim 5 is taken to depend from claim 4.

7. Claims 15, 17-19 and 21 are objected to under 37 CFR 1.75(c) as being in improper form because claim 15 uses improper multiple dependent claim wording. See MPEP § 608.01(n). For examination purposes claim 15 is treated as being dependent from claim 14.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 4, 5, 7-8, 13, 17 and 21-33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
9. Claim 4 recites the limitation "said wall" and "said tubular insert body". There is insufficient antecedent basis for this limitation in the claim. For examination purposes "said wall" is treated as the cylindrical wall of the means for generating a flow and "said tubular insert body" is treated as "said tubular insert member".
10. Claim 5 recites the limitation "said wall" and "said ports". There is insufficient antecedent basis for this limitation in the claim. For examination purposes "said wall" is treated as the cylindrical wall of the means for generating a flow and "said ports" is treated as "at least one port."
11. Claims 7, 8, 23 and 30-31 recite the limitation "said axis". There is insufficient antecedent basis for this limitation in the claim. For examination purposes "said axis" is treated as the longitudinal axis.
12. Claims 21 and 22-24 recite the limitation "said projections". There is insufficient antecedent basis for this limitation in the claim. For examination purposes "said projections" are treated as "said at least one projection."

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13. Claims 27 and 28 recite the limitation "said wall". There is insufficient antecedent basis for this limitation in the claim. For examination purposes "said wall" is treated as the cylindrical wall of the means for generating a flow.

14. Claim 13 recites the limitation "said cylindrical wall". Both the filter element and the casing have a cylindrical wall, so it is unclear which cylindrical wall is being referred to. For examination purposes "said cylindrical wall" is treated as the cylindrical wall of the filter element.

15. Claims 17 and 32 recite the limitation of "essentially parallel faces". It is unclear what the faces are parallel with. For examination purposes the faces are treated as being parallel to one another.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

16. Claims 14-15, 17-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Malkin US Patent Pub. No. 2003/0201222.

Regarding claim 14, Malkin (222) discloses a filter element having a filtering medium defining a generally cylindrical wall of the filter element, a first open end and a

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second open end, at least one projection extending inwardly from the cylindrical wall, the at least one projection having a face extending in the direction between the first end and the second end of the filter element (fig. 5 and 6, paragraph [0024]).

Regarding claims 15, 17-18, the at least one projection extends parallel with a longitudinal axis between the ends of the filter element; includes essentially parallel faces; and extends substantially continuously between the first and second ends of the filter element (fig. 5 and 6, paragraph [0024]).

Regarding claim 19, the filter element includes a plurality of annular ribs molded integrally with a number of longitudinally extending ribs to provide a support for the filtering medium, the medium being a plastic mesh spanning the interspaces between adjacent annular ribs and longitudinal ribs and the projections being molded integrally with the longitudinally extending ribs (fig. 5 and 6, paragraphs [0024] and [0028]).

Regarding claim 20, the filter element is a plastic mesh rolled to define the cylindrical wall and includes indentations defining the projections (fig. 5 and 6, paragraph [0024]).

17. Claim 21 is rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Malkin (222). Malkin (222) discloses projections extending inwardly, which are sufficient to cause turbulent flow of liquid as it passes over the projections. Malkin (222) does not disclose the inward extension of the projections being on the order of 3%-10% of the inside diameter. Because the purpose of causing turbulent flow is met the limitations of the claim are deemed to be a matter of design choice and have therefore been fulfilled.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. Claims 1, 3-7, 13, 22-24, 26-30 and 32-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hawkins U.S. Patent No. 6,719,900 in view of Malkin (222).

Regarding claims 1, 7 and 13, Hawkins (900) discloses a filter device comprising: a casing having a cylindrical wall (14) defining a longitudinal axis of the filter device having a first end, second end opposite the first end, a liquid inlet (23) formed near the first end in the cylindrical wall (14), a first liquid outlet (24) formed near the second end in the cylindrical wall and a second liquid outlet (12) arranged at the second end, a filter element (30) disposed within the casing, a tubular insert member (62) (that has an increasing outer diameter in a direction towards a second end (as disclosed in the specification pg. 5, lines 6-8)) extending with the filter element (30) along the longitudinal axis, the filter device being adapted to set up a helical flow of liquid along with and around the longitudinal axis between the tubular insert (62) and the casing (14) (fig. 6), the filter element having a filtering medium (30) defining a generally cylindrical wall, the filter element having a first and second end and being open at the first end (fig. 6), the second outlet (12) communicating with the interior of the filter element (fig. 1 and 6). Hawkins (900) does not disclose the filter element having at least one projection.

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Malkin (222) teaches a filter element having at least one projection extending inwardly in relation the contour of the cylindrical wall defined by the filtering medium, the projection having a face extending in the general direction between the first end and the second end of the filter element, the at least one projection extends parallel with the longitudinal axis of the filter element and the filter element is a plastic mesh (paragraph [0025]) rolled to define the cylindrical wall of the filter element and includes indentations defining the projections (fig. 5 and 6, paragraph [0024]). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the filter element of Malkin (222) in the device of Hawkins (900) because the projection helps form a support structure that prevents the collapse of the filter device (paragraph [0024]).

Regarding claim 3, Hawkins (900) further includes means (80) for generating a flow of liquid around the longitudinal axis said means (80) being arranged within the casing adjacent the liquid inlet (fig. 6), the structure of the means for generating the flow is disclosed in claims 4 and 5 therefore 112 6th paragraph is not invoked.

Regarding claims 4 and 5, Hawkins (900) further discloses the means (80) for generating a flow includes a cylindrical wall extending along the longitudinal axis and having at least one port (94), the wall has an outer surface (84) defining together with the casing a first chamber and the wall has an inner surface (86) defining together with the tubular insert body a second chamber the second chamber communicating with the inside of the filter element at the open end (fig. 6-8). The cylindrical wall includes slanted edges (89) delimiting ports (94) (fig. 8).

Regarding claim 6, Hawkins (900) further discloses the second outlet (12) includes a valve (79) (fig. 1).

Regarding claim 22, Hawkins (900) discloses a filter device comprising: a casing having a cylindrical wall (14) defining a longitudinal axis of the filter device having a first end, second end opposite the first end, a liquid inlet (23) formed near the first end in the cylindrical wall (14), a first liquid outlet (24) formed near the second end in the cylindrical wall and a second liquid outlet (12) arranged at the second end, a filter element (30) disposed within the casing, a tubular insert member (62) (that has an increasing outer diameter in a direction towards a second end (as disclosed in the specification pg. 5, lines 6-8)) extending with the filter element (30) along the longitudinal axis, the filter device being adapted to set up a helical flow of liquid along with and around the longitudinal axis between the tubular insert (62) and the casing (14) (fig. 6), the filter element having a filtering medium (30) defining a generally cylindrical wall, the filter element having a first and second end and being open at the first end (fig. 6), the second outlet (12) communicating with the interior of the filter element (fig. 1 and 6). Hawkins (900) does not disclose the filter element having at least one projection. Malkin (222) teaches a filter element having at least one projection extending inwardly in relation the contour of the cylindrical wall defined by the filtering medium, the projection having a face extending in the general direction between the first end and the second end of the filter element, the filter element includes a plurality of annular ribs molded integrally with a number of longitudinally extending ribs and the filter element is a plastic mesh (paragraph [0025]) spanning the interspaces between adjacent annular

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ribs and longitudinal ribs and the at least one projection being molded integrally with the longitudinally extending ribs (fig. 5 and 6, paragraphs [0024] and [0028]). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the filter element of Malkin (222) in the device of Hawkins (900) because the projection helps form a support structure that prevents the collapse of the filter device (paragraph [0024]).

Regarding claims 23 and 24, Hawkins (900) in view of Malkin (222) further discloses the tubular insert member (62) and the filter element extend coaxially with the longitudinal axis and define an annular space there between having a radial width at the at least one projection, but does not disclose the radial width being on the order of 3%-10% of the inside diameter of the filter element. The projections extending inwardly are sufficient to cause turbulent flow of liquid as it passes over the projections. Because the purpose of causing turbulent flow is met the limitations of the claim are deemed to be a matter of design choice and are therefore fulfilled.

Regarding claim 26, Hawkins (900) further includes means (80) for generating a flow of liquid around the longitudinal axis said means (80) being arranged within the casing adjacent the liquid inlet (fig. 6), the structure of the means for generating the flow is disclosed in claims 27 and 28 therefore 112 6th paragraph is not invoked.

Regarding claims 27 and 28, Hawkins (900) further discloses the means (80) for generating a flow includes a cylindrical wall extending along the longitudinal axis and having at least one port (94), the wall has an outer surface (84) defining together with the casing a first chamber and the wall has an inner surface (86) defining together with

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the tubular insert body a second chamber the second chamber communicating with the inside of the filter element at the open end (fig. 6-8). The cylindrical wall includes slanted edges (89) delimiting ports (94) (fig. 8).

Regarding claim 29, Hawkins (900) further discloses the second outlet (12) includes a valve (79) (fig. 1).

Regarding claims 30, and 32-33 Malkin (222) further teaches the at least one projection extending parallel with a longitudinal axis, including essentially parallel faces, and extending continuously between the first and second ends of the filter element (fig. 5 and 6, paragraphs [0024] and [0028]). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the filter element of Malkin (222) in the device of Hawkins (900) because the projection helps form a support structure that prevents the collapse of the filter device (paragraph [0024]).

19. Claims 2 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hawkins (900) in view of Malkin (222) as applied to claims 1 and 23-24 above, and further in view of Delcellier et al. U.S. Patent No. 3,448,858.

Though claim 2 is worded as a multiple dependant claim it is treated as depending solely from claim 1 and is not considered to be a multiple dependant claim.

Regarding claim 2, Hawkins (900) in view of Malkin (222) teaches a liquid inlet but does not teach the inlet arranged to provide a tangential flow into the casing. Delcellier (858) teaches a filter device with an inlet (72) that provides a tangential flow of liquid into the casing in relation to the wall of the casing (col. 4, lines 14-21). It would have been obvious to one having ordinary skill in the art at the time the invention was

made to use the inlet of Delcellier (858) because the centrifugal action aids in separating heavy solids from the liquid stream.

Regarding claim 25, Hawkins (900) in view of Malkin (222) teaches a liquid inlet but does not teach the inlet arranged to provide a tangential flow into the casing. Delcellier (858) teaches a filter device with an inlet (72) that provides a tangential flow of liquid into the casing in relation to the wall of the casing (col. 4, lines 14-21). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the inlet of Delcellier (858) because the centrifugal action aids in separating heavy solids from the liquid stream.

20. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Malkin (222) in view of Hollar U.S. Patent 3,637,078. Malkin (222) discloses a filter element with at least one projection but does not disclose the projection extending helically around a longitudinal axis. Hollar (078) teaches a filter element with a projection (40) extending helically around a longitudinal axis between a first and second end of a filter element (fig. 1). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the projection of Malkin (222) with the teaching of Hollar (078) because the helical vane allow the fluid to remain in contact with the filter surface for a longer period of time (col. 2, lines 55-60).

21. Claims 8 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hawkins (900) in view of Malkin (222) as applied to claims 1, 23 and 24 above, and further in view of Hollar (078).

Regarding claim 8, Hawkins (900) in view of Malkin (222) discloses a filter device with a filter element having at least one projection but does not disclose the projection extending helically around a longitudinal axis. Hollar (078) teaches a filter element with a projection (40) extending helically around a longitudinal axis between a first and second end of a filter element (fig. 1). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the projection of Malkin (222) with the teaching of Hollar (078) because the helical vane allow the fluid to remain in contact with the filter surface for a longer period of time (col. 2, lines 55-60).

Regarding claim 31, Hawkins (900) in view of Malkin (222) discloses a filter device with a filter element having at least one projection but does not disclose the projection extending helically around a longitudinal axis. Hollar (078) teaches a filter element with a projection (40) extending helically around a longitudinal axis between a first and second end of a filter element (fig. 1). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the projection of Malkin (222) with the teaching of Hollar (078) because the helical vane allow the fluid to remain in contact with the filter surface for a longer period of time (col. 2, lines 55-60).

Conclusion


22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin Kurtz whose telephone number is 571-272-8211. The examiner can normally be reached on Monday through Friday 8:00am to 4:30pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker can be reached on 571-272-1151. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Bk 5/16/06



TERRY K. CECIL
PRIMARY EXAMINER